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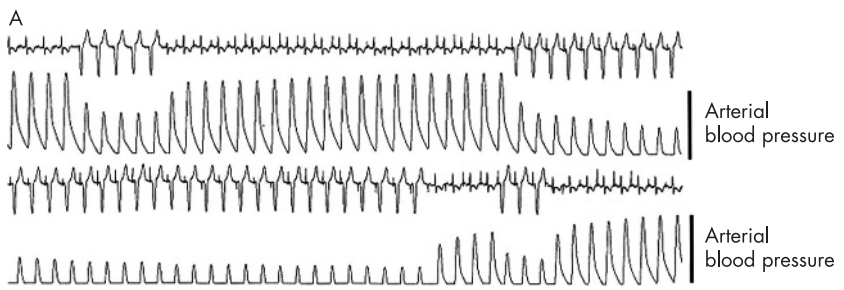
IMAGES IN CARDIOLOGY

doi: 10.1136/hrt.2006.094656

Right ventricular pacing-induced hypotension

A cardiologist was consulted to evaluate a patient with intermittent hypotension. A 71-year-old woman with a history of coronary artery disease and coronary bypass surgery, type 2 diabetes and sick sinus syndrome s/p dual-chamber pacemaker implantation had been admitted to the intensive care unit with pulmonary oedema.

The problem was a ventricular pacing-related decrease in systolic blood pressure from 110 to 70 mm Hg. Even few ventricle-paced beats led to a significant decrease in systolic blood pressure that corrected after the return of native conduction. Programmed atrioventricular interval was short and thus led to intermittent atrial synchronous ventricular pacing. As the atrioventricular synchrony was preserved, the decrease in cardiac output was not due to the classic pacemaker syndrome. The decrease in cardiac output was most likely secondary to right ventricular apical pacing that results in an asynchronous ventricular contraction. To avoid unnecessary right ventricular pacing, a longer atrioventricular interval was programmed and hypotensive episodes resolved (panels A and B).



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